CLAIMS

1. A catalyst body comprising:

a porous carrier in which a large number of aggregate particles containing a main component of a nonoxide ceramic and/or a metal are bonded to one another while a large number of pores are disposed; and

a catalyst layer carried on the porous carrier and containing a compound of an alkali metal and/or an alkali earth metal,

wherein the porous carrier has an oxide film unavoidably formed on a part of the surface of the aggregate particles, and an oxide film protective layer formed of a material which does not form low-melting glass with the alkali metal and/or alkali earth metal is further disposed between the oxide film and the catalyst layer in such a manner as to coat at least a part of the oxide film.

2. The catalyst body according to claim 1, wherein the porous carrier contains a main component of the nonoxide ceramic containing a silicon (Si) element and/or metal silicon.

3. The catalyst body according to claim 1 or 2, wherein the porous carrier contains a main component of at least one selected from the group consisting of silicon carbide (SiC), metal silicon bonded silicon carbide (Si-

SiC), and silicon nitride (Si_3N_4).

4. The catalyst body according to any one of claims 1 to 3, wherein the oxide film contains a main component of silica (SiO_2).

5. The catalyst body according to any one of claims 1 to 4, wherein the material which does not form the low-melting glass with the alkali metal and/or alkali earth metal is a compound of at least one element selected from elements belonging to the group A:

the group A: scandium (Sc), titanium (Ti), vanadium (V), chromium (Cr), manganese (Mn), iron (Fe), cobalt (Co), nickel (Ni), copper (Cu), zinc (Zn), gallium (Ga), germanium (Ge), yttrium (Y), zirconium (Zr), niobium (Nb), molybdenum (Mo), tin (Sn), and antimony (Sb).

6. The catalyst body according to claim 5, wherein the material which does not form the low-melting glass with the alkali metal and/or alkali earth metal is a compound of at least one element selected from the group consisting of zirconium (Zr) and titanium (Ti) among the elements belonging to the group A.

7. The catalyst body according to any one of claims 4 to 6, wherein an oxide of the alkali metal and/or alkali earth metal, the material which does not form the

low-melting glass with the alkali metal and/or alkali earth metal, and silica (SiO_2) have an eutectic point at 800°C or more.

8. The catalyst body according to any one of claims 1 to 7, wherein the porous carrier has a porosity of 40 to 90%.

9. The catalyst body according to any one of claims 1 to 8, wherein the catalyst layer contains a compound of at least one noble metal element selected from the group consisting of platinum (Pt), palladium (Pd), and rhodium (Rh) in addition to the compound of the alkali metal and/or alkali earth metal.

10. The catalyst body according to any one of claims 1 to 9, wherein the porous carrier has a honeycomb form having a plurality of cells which are partitioned by partition walls and which constitute channels of a fluid.

11. The catalyst body according to claim 10, wherein the porous carrier further comprises plugging portions which alternately plug inlet-side and outlet-side end faces of the plurality of cells.

12. The catalyst body according to claim 10 or 11, wherein the porous carrier comprises a plurality of

honeycomb segments, and the plurality of honeycomb segments are integrally bonded.